

Fig. 1

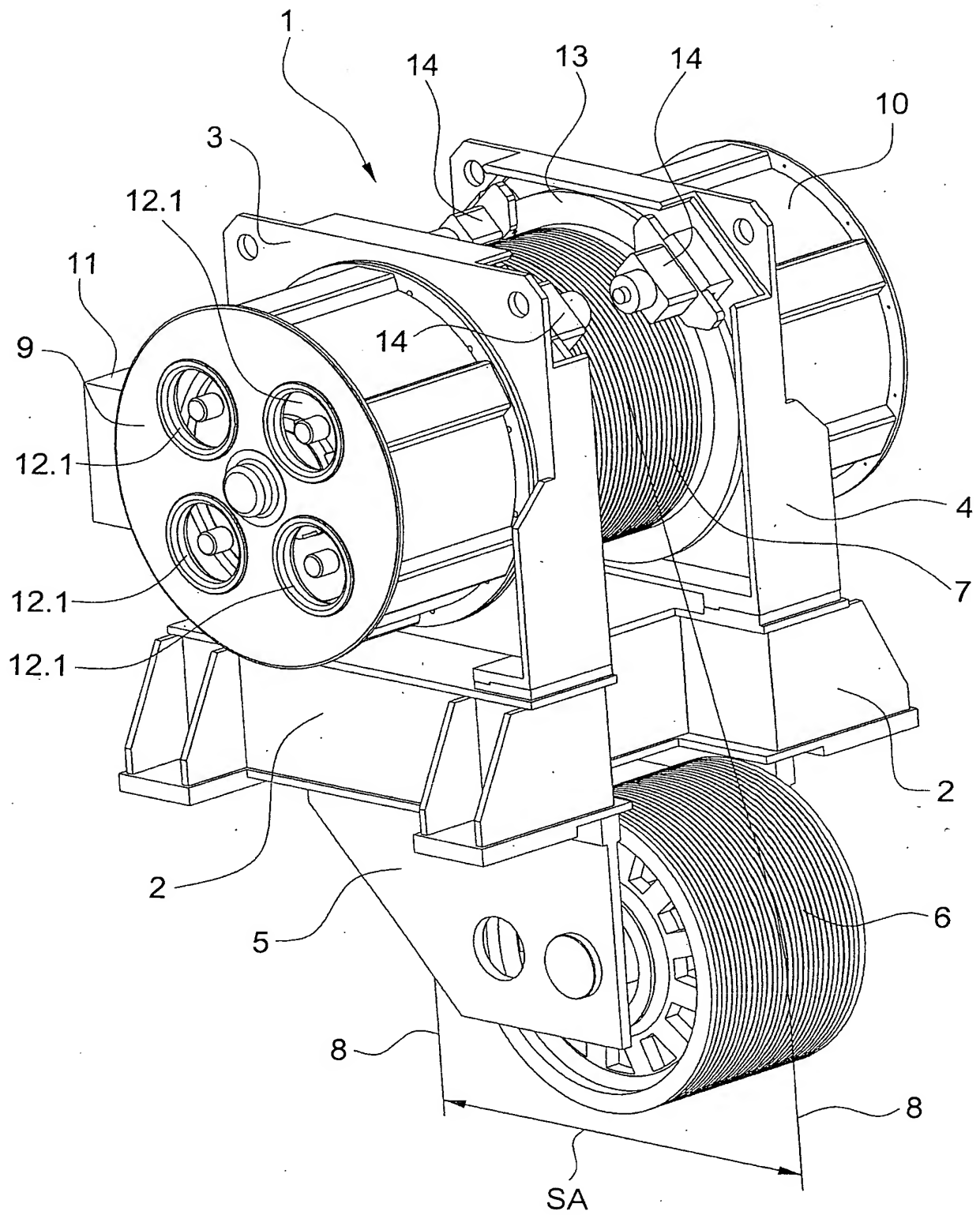


Fig. 2

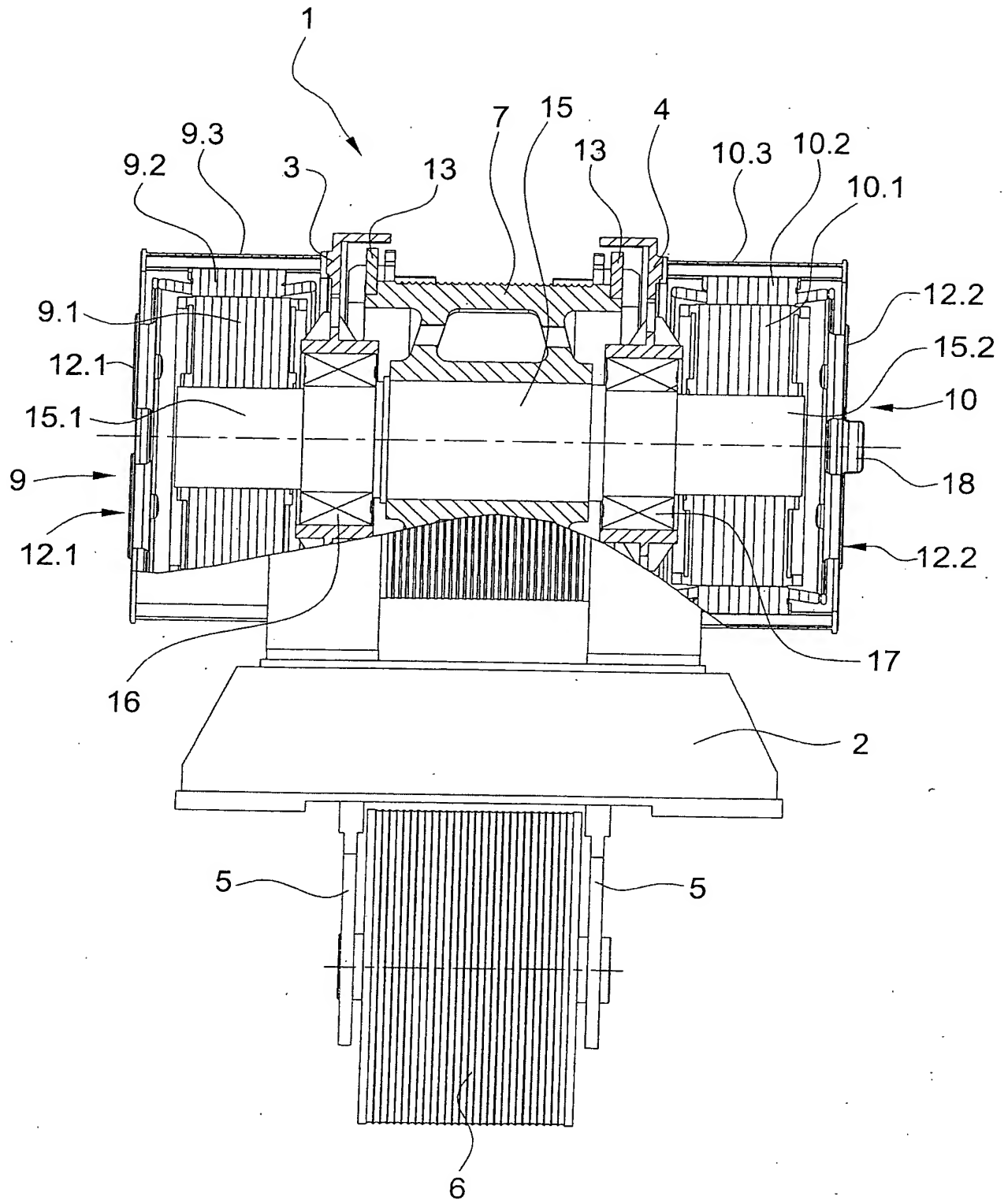


Fig. 3

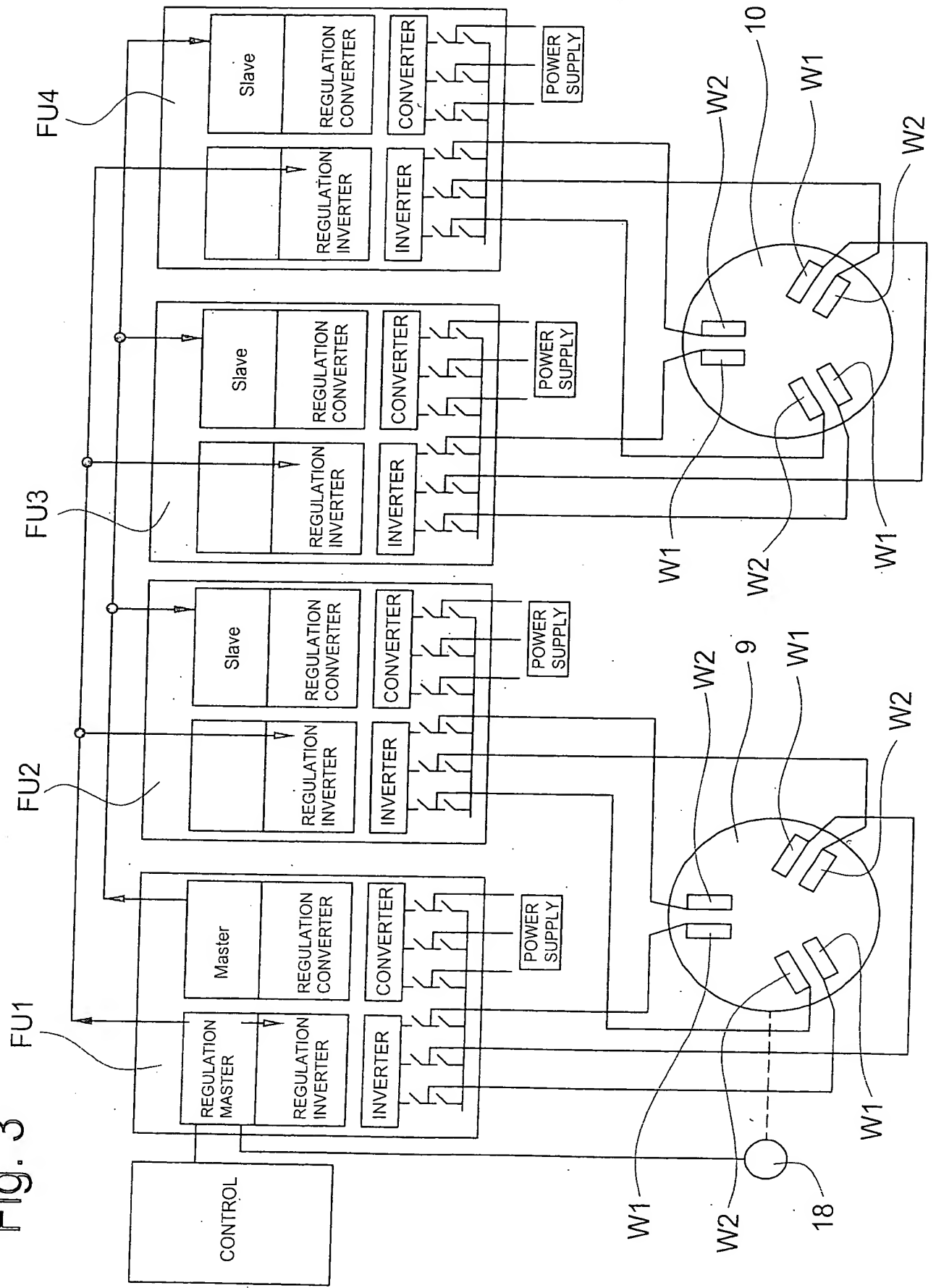


Fig. 4 is a block diagram of a four-unit power system. The system consists of four functional units (FU1, FU2, FU3, FU4) connected to a common DC BUS. Each unit contains a DC-REGULATOR, a CONVERTER, a CURRENT REGULATOR, and an INVERTER. The DC-REGULATOR is powered by a POWER SUPPLY. The CURRENT REGULATOR receives a reference current (i_{REF}) from a ROTATIONAL SPEED REGULATOR in FU1. The INVERTER outputs are connected to a motor (10) and a generator (15.2) via a switch (18). The motor and generator are connected to a common AC bus (15). The system is controlled by a CONTROL unit that provides a reference voltage (v_{REF}) to the rotational speed regulator and receives feedback signals (v_{ACT} , i_{ACT}) from the motor and generator.

